

The Next-Generation Supercomputer project

Overview of the project (Policy of the Ministry of Education, Culture, Sports, Science and Technology)

Supercomputing technology is recognized today to be as vital to scientific research and development as experiments and theory, and the Next-Generation Supercomputer is being built with the aim of further developing this technology. Due to be ready in 2012, the new supercomputer will ensure that Japan continues to lead the world in science and technology, academic research, and industry.

The elements of the project are as follows:

- 1 **Design, build, and set up the Next-Generation Supercomputer, the world's fastest and most advanced computer, with a speed of 10 petaflops**
- 2 **Develop and distribute large-scale software applications (the "Grand Challenge" software) that make full use of the supercomputer**
- 3 **Connect the supercomputer to the Cyber Science Infrastructure, a multilayered environment for the shared use of supercomputers across Japan using the Science Information Network (run by the National Institute of Informatics)**
- 4 **Set up a center to run the supercomputer, to be the world's top center of excellence in the field of supercomputing**

The Next-Generation Supercomputer project is being carried out by RIKEN, with partners in industry, universities, and the government, under an initiative by MEXT (the Ministry of Education, Culture, Sports, Science and Technology).

Schedule

Partial operation of the system in FY 2010, full completion planned for 2012

		2006	2007	2008	2009	2010	2011	2012
System		Conceptual design		Detailed design		Prototype and evaluation, Production, installation, and adjustment		Tuning
Software (Grand Challenge software)	Next-Generation Integrated Nanoscience Simulation	Development, production, and evaluation					Verification	
	Next-Generation Integrated Simulation of Living Matter	Development, production, and evaluation					Verification	
Buildings	Computer building		Design	Construction				
	Research building		Design	Construction				